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ABSTRACT

Using a social learning approach, this study compared the effects of two experimental mini-courses on a specially constructed measure of competency of behavioral response. The two experimental groups and the control group were all black high school students. The curricula suitable for use by high school teachers utilized behavioral modification techniques. In one version of the curriculum students went through a process of self-application of the behavior modificatn process. The measure of competence used judges from the students' own environment to determine what might be called "competent" responses in this particular environment. The method used for test construction is that proposed by Goldfriend and D'Zurilla in "A Behavioral-Analytic Method for Assessing Competence." Results of statistical analysis of pre- and posttest scores on the test of behavioral competence did not indicate any statistically significant differences between the treatment and control conditions. Students in the self-study treatment did, however, show significant improvements in attendance compared to the other conditions. These students evaluated their experience very favorably. Furthermore, 13 out of 16 achieved their goals for behavior change which they had worked on in the classroom. (Author/JM)

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FINAL REPORT

Contract No. OEC-9-72-0033 (057)

An Experimental Evaluation of a Behavior Change Program for Black High School Students

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Using a social learning approach, this study compared the effects of two experimental mini-courses on a specially constructed measure of competency of behavioral response.

The two experimental groups and the control group were all black high school students. The curricula suitable for use by high school teachers utilized behavioral modification techniques. In one version of the curriculum students went through a process of self-application of the behavior modification procedures.

The measure of competence used judges from the students own environment to determine what might be called "competent" responses in this particular environment. The method used for test construction is that proposed by Goldfried and D'Zurilla in "A Behavioral-Analytic Method for Assessing Competence."

Results of statistical analysis of pre- and posttest scores on the test of behavioral competence did not indicate any statistically significant differences between the treatment and control conditions.

Despite the finding that the favorable changes in test scores were not associated with the treatments, students in the self-study treatment did show significant improvements in attendance compared to the other conditions. These students evaluated their experience very favorably. Furthermore, thirteen out of sixteen achieved their goals for behavior change which they had worked on in the classroom.

Possible interpretations include the need for individualized strategies in teaching or the possibility that the social environment for these students which supports "incompetent" behavior was not significantly changed by the experiment so as to bring about behavioral changes other than those specifically modified by classroom treatment.

INTRODUCTION

Using a social learning approach, this study compared the effects of two experimental mini-courses on a specially constructed measure of competency of behavioral response.

The two experimental groups and the control group were all black high school students. The curricula suitable for use by high school teachers utilized behavioral modification techniques. In one version of the curriculum students went through a process of self-application of the behavior modification procedures.

The measure of competence used judges from the students own environment to determine what might be called "competent" responses in this particular environment. The method used for test construction is that proposed by Goldfried and D'Zurilla in "A Behavioral-Analytic Method for Assessing Competence."

PART I

THE PROBLEM UNDER INVESTIGATION

Many black students are limited in their interpersonal and decision-making flexibility and often repeatedly engage in behavior that is not highly functional in the particular situation which it occurs.

Recurrent crises arising from black students' often inflexible interpersonal skills, maladaptive responses and inadequate discrimination of appropriate responses in various situations often take the form of behaviors such as fighting, temper bursts, verbal aggression against school personnel and other students, cutting class, refusal to do "what the teacher says," sulking and withdrawn silence. Noticed less often, but of equal importance are behaviors such as reluctance to speak out in class for fear of embarrassment or coming to school "high" on drugs. Even before a student arrives at school he may have to make important decisions or experience interpersonal difficulties at home or among his peers which inevitably affect his attitude and performance in school. In many schools the staff is not prepared to meet the educational needs of black students in these areas of their social and psychological functioning which are related to their behavior at home, among their peers, as well as at school.

The black community is one which is ravaged by the effects of racism, isolation, oppression and powerlessness. Though the current trend in educational literature is to discuss the above types of behavior in terms of "normative conflicts," social pathologies, or inappropriate socialization to a "peer culture" (Bloom, Davis and Hess, 1965), Yinger (1960) has introduced the concept of "contra-culture" which takes into account the reality of blocked means--ends of relationships for the so-called disadvantaged and other groups whose activities are often in conflict with the dominant group.

Few educators or researchers express the view that the black student's behavior is a functional adaptation to the exigencies of the environment. Requirements of social and psychological functioning

such as peer approval, self-regard and even physical safety often depend upon the youngster's ability to behave successfully in ways the school defines as deviant; the students, however, perceive these behaviors as necessary requirements for living in their community.

It is very important that this problem be understood in the context of the experience of black people. It is not just a coincidence that black students' behavior can be characterized as attempts to control the environment and to maintain self-consistency under conditions of limited positive reinforcement and feedback from the larger society for their racial group. The literature is replete with discussions of Negro "self-concept" or "weak ego-identification" (Proshansky and Newton, 1969). But little has been said of how black people have managed to maintain some semblance of self-consistency and positive self-regard. Black people may express symptoms of identification with whites in some areas of their lives, but there is also evidence that black people's apparently inconsistent behavior can be better understood in terms of their efforts to maintain positive self-regard (Scott, 1970; Hannerz, 1969).

The intervention strategy used in this research is one of behavior modification. These techniques are incorporated into a curriculum suitable for the high school level.

In order to avoid an ethnocentric assessment of what is effective and appropriate behavior in the black community, a special test of behavioral competence was developed as a measure of the effectiveness of the curriculum. This test construction process utilized a panel of judges from the black community.

BACKGROUND OF INTERVENTION STRATEGIES AND ASSESSMENT OF COMPETENCE

Theoretically and operationally this research combines techniques suggested by Bandura (1969), (1971); Duncan (1969); Goldfried and D'Zurilla (1969); and Toch (1969).

Bandura's work (1969) is the primary source of evidence of the efficacy of such intervention strategies as behavior rehearsal, role-modeling, and discrimination training. The techniques were used in the curricula. Bandura also stresses the importance of recognizing reinforcement consequences for self-regard that may be in effect in various situations.

Ann Duncan (1969) reports successful results with teenagers using self-applied behavior modification techniques on their own self-selected target behaviors. Thirty-three of the fifty-five students enrolled in her after-school program turned in reports of successful behavior modification projects. Some of the target behaviors which students selected were: losing weight, swearing, nail biting, face touching, and knuckle cracking. The report indicates that "teenagers can control their own behaviors by self-applying behavior modification techniques... they can effectively and efficiently change behaviors their parents had complained about for years." (Duncan, 1969:547).

Duncan's (1969) effective use of the technique of systematic self-study and self-applied behavior modification procedures was the model for teaching the principles of behavior modification in one of the experimental classroom treatments.

A powerful behavior modifier is the process of <u>self-study</u> itself. In a study of violent men Hans Toch investigated the benefits of violence for its users. The study gives evidence of compensatory conduct among violent men and of a utilitarian function of violence. Of violent men Toch writes, "Theirs is not a psychological condition, it is a specialized propensity--a gift for escalating inter-personal encounters into explosive situations" (Toch, 1969:241). One of the most exciting aspects of Toch's research is its use of the non-professional who himself manifests the problem behavior as a collaborator in the research project. Toch suggests that self-participation is a necessary component of effective diagnosis and a powerful behavior modifier.

Toch's (1969) research suggests that self-study may be more effective in changing behavior than teaching strategies which are aimed

at increasing awareness or knowledge. We test this proposition explicitly by manipulation of the experimental treatments.

Goldried and D'Zurilla's (1969) method for assessing competence was used as a model to evaluate the treatments.

Goldfried and D'Zurilla (1969) propose a Behavioral-Analytic method which emphasizes both individual responses as well as the problematic situation. This behavioral-analytic method for assessing competence involves the construction of an empirically validated measurement instrument for evaluating the effectiveness of responses to a sample of commonly occuring problematic situations. The criterion analysis involved in the construction of the instrument is the specification of the criterion responses by persons who are themselves "significant evaluators" of such behavior in the natural environment. This method was used to develop a similar measurement instrument to evaluate the effectiveness of two classroom treatments, "mini-courses" on behavior modification.

Over-all Design

The design used both control and experimental subjects in a comparison of two experimental classroom treatments. Both treatments were "mini-courses" in behavior modification. The effectiveness of black students' responses to a set of problematic situations are the critical behaviors from which treatment effects are to be inferred. This dependent variable is defined as "competence" and is operationalized by means of an original measurement instrument called the Discriminative Abilities Test. This test (DAT) identifies the "effectiveness or adequacy with which the individual responds to various problematic situations" (Goldfried and D'Zurilla, 1969) presented to him.

The study was designed to test the following hypothesis:

> It is expected that subjects who learn behavior modification through systematic self-study and the self-application of behavior modification procedures will have higher competence scores than subjects who learn behavior modification with no self-applied procedures. Both experimental groups are expected to have higher competence scores than the no-contact control group.

PART II

METHOD

Subjects

The subjects were 37 male and female black senior high school students. The design called for equal numbers of males and females within each treatment condition. Randomization was not completely possible due to difficulties in recruiting and scheduling students so that the "treatments" did not conflict with normal school activities. Those seniors with free time at the hours selected for the treatments were assigned to one of the experimental mini-courses. The other students who were tested formed the control group. The study recruited a total of 10 males and 27 females. The No Self-study and Control conditions had twice as many girls as boys. In the Self-study condition this ratio was 3 to 1.

Procedure

Preliminary Research Phase. Instrumentation, the major activity of this phase of the study, was carried out during the first three months. The procedures involved in the Pilot Study to develop the instrument are detailed in Appendix A. The research questions were specified in advance. The Behavioral-Analytic Method for Assessing Competence, which was the model on which the instrument we constructed is based, utilizes an open-ended cognitive role-playing format. This format was not suitable for use with our subjects because of a reading and writing requirement in the response mode.

We did not wish to risk making either the test or the classroom experience aversive to any of the subjects, given the previous learning history of many black students. A reading and writing requirement might not allow for a fair test of either the instrument or the curricula. The effects might largely depend upon the extent to which individuals had mastered those abilities which are valued and rewarded in school. We comprised with a multiple-choice audio-visual objective test which

required no reading in either its administration or response mode.

Subjects were presented with a picture (overhead transparency) while the episode was read aloud by the experimenter. Six (6) responses, which had been randomized, were then read aloud and the subjects were instructed to select the one response which best resolved the problem. After all ten of the items were completed, each episode was presented a second time and subjects answered three questions about each episode. This measurement instrument closely follows the Behavioral-Analytic Method with the following exceptions: (1) the test requires no reading or writing; (2) a standardized scoring system was devised whereby the effectiveness of a response (competence) is determined before the test is administered; and (3) the subjective aspects of the responses are evaluated apart from the objective aspects. These changes are not inconsistent with the theoretical underpinnings of the method originated by Goldfried and D'Zurilla. Appendix B is a sample test item.

The second activity of this phase of the study was the preparation of the experimental curricula (treatments). Several parts of the curricula had already been field-tested. What remained was the construction of the lesson plans, teacher training, and preparation of instructional materials. Sample Lesson plans are presented in Appendix C along with some information about materials used by our subjects.

A young black woman who had just completed a teacher intern program was selected to teach both mini-courses. Her training consisted of a "dry run" through the lesson plans and familiarizing her with the methods for the self-application of behavior modification procedures.

Treatments

In so far as the problem identified by this study is the subjects' lack of flexibility in interpreting and coping with a variety of situations, the experimental curricula were designed to bring black students' behavior under more flexible cognitive control and increase the liklihood of their responding to situations through more adequate assessment of the stimulus determinants actually in effect. Both

treatments aimed to help black students cope with problematic situations more effectively. The Self-study condition used the self-application of behavior modification procedures to the students' own self-selected target behaviors. The other treatment, simply omitted self-applied procedures. Both treatments used the techniques of behavior rehearsal, role-playing, and class discussions.

PART III

RESULTS

The Discriminative Abilities Test (DAT): Scoring and Analysis

Scoring Competence. The results reported here are the effects of treatment on changes (increase or decrease) in levels of the dependent variable, competence, and the difference in competence scores between conditions after treatment. The level of competence was determined by a panel of twelve judges or significant evaluators as part of the test construction procedures. Each of the six (6) multiple-choice alternative responses has a score assigned to it which is the average of the twelve judges' ratings of the effectiveness of that response on a scale from one (least effective) to six (most effective). The result of retaining the average of the judges' ratings is that none of the test items have the same absolute values represented among their scores. Even though the range of possible scores assigned to the alternatives within each response varies in this way, and hence the two tests vary also, three of the response alternatives are above a midpoint and three responses are below it.

A competence score is calculated by first summing all the scores for the alternatives selected. Then an individual's total score on all ten items is expressed as the percentage of the highest score possible on the test. This applies to both the pretest and the posttest. For example, a score of 41.8 on the pretest would become 79% (of 52.8), while a score of 41.9 on the posttest would be 86% (of 48.7). The percentage of the highest score possible is the critical statistic

used in the evaluation of the effect of treatment on level of competence.

Before-After Comparisons. Table I shows the frequency of changes (increase or decrease) in competence scores on the pre- and posttest for each condition. Contrary to expectation, most subjects' competence scores decreased on the posttest. A Chi square test was performed to test the hypothesis that there is no relationship between change in competence and treatment condition. A Chi square value larger than 6.0 with 2 degrees of freedom is significant at the .05 level. The value of Chi square calculated from the frequency data presented in Table I is 1.09. It is concluded, therefore, that change in competence and treatment condition are not significantly related.

Within the Self-study condition the number of subjects whose competence decreased after treatment is significantly different from the number whose scores increased at less than .05. The probabilities associated with values as small as the observed number of subjects whose scores increased within each condition are given in Table 2. A sign test determined that the probability of 13 scores decreasing in a sample of 16 (see Table I) would occur by chance only two out of one hundred times. The number of subjects whose competence scores decreased in the No Self-study and Control conditions are not statistically significant. Nevertheless, this tendency for most subjects, irrespective of treatment condition, to score lower on the posttest suggests that the instrument may not be a reliable assessment of the effects of treatment. Therefore, before-after comparisons may not be the best indicators.

Posttest Comparisons. Table 3 presents the frequency of scores above and below a common median (83%) for the posttest only. Given the possibility that the measurement instrument may contribute to the observed differences in before-after comparisons, the posttest scores considered independently may provide a better estimate of the effects of treatment. An Extension of the Median Test was used to test the hypothesis that treated subjects have higher competence scores. The value of Chi square obtained from the frequencies presented in Table 3

is not significant. However, inspection of Table 3 shows that more than half the competence scores in the two experimental treatment conditions were above the median. While the majority of scores in the control condition were below the median. Although this is consistent with our hypothesis of higher scores for treated subjects, the probabilities associated with the occurrence of these values is not very different from chance.

The Kruskall-Wallis One-Way Analysis of Variance by ranks for independent samples, which is a more sensitive test than the Extension of the Median Test, was also performed to test the above hypothesis (Siegel, 1956). It is a test which preserves the magnitude of the scores by converting them to ranks. And if the scores in any one condition are consistently higher or lower in the rank ordering than the scores from the other conditions then the value of H reaches statistical significance. The tendency for higher scores to occur in the treated conditions is not statistically significant. The value of H (.70) was not large enough to allow us to reject the hypothesis that the level of competence for subjects in different treatment conditions are the same. In other words, the differences observed in the posttest scores within each treatment condition are not statistically significant.

Further Data on Evaluation of the Curricula. Our objective assessment of the effects of treatment on competence obscures the remarkable success of the students' self-study projects in Condition 1. The success of this curriculum lies in the near perfect attendance the students' evaluations of the course and the graphs of their self-recorded observations. These graphs show that 13 of the 16 students achieved their goals for behavior change. The other three students had improved but did not sustain the improvements.

Some of the behavior targets were to: "stop smoking marijuana," "ask the teacher to explain the assignment when I don't understand," "stop biting my fingernails," "stop letting people walk all over me," and "stop cursing at my friends when I'm angry." Students reinforced desired behavior by: "playing a little piano," "reading a book," "buying something to eat," "playing basketball," etc.

Though we used contingency contracts and paid the students for participating, we are confident that the self-study students would have continued the course without pay had we been able to extend it. One student sent this very personal message to us on the back of her graph:

> Dear Miss Reeves and Grace (teacher)
>
> I think this was a real good thing to do. Because it was really needed. Before this program I didn't really know people were taken (sic) that much advantage of me. My sister and close friends had told me. But I didn't really know for myself. So thank you very much.
>
> Good luck to you all.
> Margaret

The students in the No Self-study mini-course reported that the class was "interesting" and helped them to "understand people better." But the teacher encountered the same old problems: tardiness, cutting, and class disruptions. As a result we are inclined to conclude that self-study was not only a prelude to improved behavior, but a prerequisite for the necessary personal commitment to the goals of the course. To judge from the attendance pattern and behavior in class, the self-study curriculum was a very effective and rewarding learning experience.

PART IV
CONCLUSIONS

The findings suggest that neither of the experimental treatments helped students solve problems more effectively than they did before they participated in the behavior change mini-courses. That is, the test results do not show an increase in competence after treatment or higher competence scores for treated subjects. Most subjects performed less effectively on the posttest, though this was statistically significant in the self-study condition only. However, since the subjects who were not treated also did less well on the posttest we are inclinded

to question the reliability of the before-after comparisons. Nevertheless, when we consider the posttest measure alone, we still do not find statistically significant evidence to support the hypothesis that treated subjects are able to cope with the test situations more effectively than untreated subjects. The data indicate that self-study did not affect the level of competence as predicted. And though there were more subjects in the two experimental treatment conditions who had high scores (above the median), there were nearly as many in these conditions who had low scores (below the median).

However, there are several ways to interpret these findings other than concluding that the hypotheses are not plausible. We will grant the data do not support our expectations. But first let us consider the possibility that our measurement instrument may not be a reliable indicator of treatment effects. Internal analysis of the two tests might suggest that some of the items have a very low association with the over-all score on competence, thereby depressing the total score. This may be more true of the posttest, especially when we take into account the scores for control subjects on this test.

Second, the treatments may be insensitive to important individual differences. An implicit assumption underlying our methodology was that subjects with different learning styles and who manifest different aspects of the problematic behavior would respond equally well to the same treatment. Perhaps a more individualized treatment strategy is needed to give individuals optimum exposure to the particular aspects of the treatment which would help them most. Self-study would still be the crucial variable, but subjects would concentrate on different aspects within each treatment based on a clearer assessment of their needs. Then we would be more certain that we are evaluating the differential effects of self-study and not the idiosyncratic tendencies among certain individuals. For some subjects responded very well to treatment, while others did not.

Another difficulty we face in drawing hard and fast conclusions from these findings is that subjects within each condition may have been

different from each other due to the fact that assignment to treatments was on the basis of the free time students had available. We might have used the prettest scores diagnostically to tailor treatment strategies as well as to minimize variability among subjects. Since the sample was self-selected, we might also have screened subjects to insure that they were motivated to improve their behavior. At this point we can only assume that the subjects were motivated because they responded so positively to the courses and attendance was excellent.

Another consideration is the limitations on research in a natural environment. Though we attempted to isolate and control variables, we were not successful in altering the environment or the controlling conditions which precipitate many of the problematic responses we wished to modify. Theoretically the self-study treatment, which we expected to be a powerful behavior modifier, teaches the individual how to improve his own behavior and how to change his environment so that his improved behavior is a more likely response. However, we were not able to insure that each subject in this condition had managed to successfully change the contingencies in his environment to support improved behavior. In other words, some students may have learned very well within the classroom and even had improvement in their behavior under certain conditions. But if there was no systematic effect on the environment with which they must interact, there would be no transfer or maintenance of what was learned. By teaching a variety of new responses we may have neglected to emphasize ways to help students maintain and transfer their new behaviors, not only to the test situation, but to the natural environment outside the classroom. And though the students in the self-study condition managed their self-selected change programs very well, we can not assume that change in one area of their behavior would be maintained if the environment remained the same. After all, we were only "treating" one part of the problem. Therefore, the Discriminative Abilities Test may tell us more about the refractory nature of the provocative conditions in the environment than about the ability of students to change their own behaviors and effectively control the

stimulus determinants. What this suggests is that the treatment base should be broadened to include the social setting in which students encounter their problematic situations.

RECOMMENDATIONS

The students, members of the community, and the school staff members who participated in this study felt that it was a needed and worthwhile undertaking. The classroom experiences of the students in the treatments were remarkably successful, given the many problems to be encountered in most schools today. We feel, however, that this project needs to be evaluated further before the curriculum can be made available to the community and to the school. Closer scrutiny of the data may help us to determine the conditions under which we will observe improved behavior. Further research to improve measurement techniques is needed before the results can be relied upon with confidence. Nevertheless, we have faith in the methodology as a creative way to involve students, parents, teachers and interested members of the community in the education process and in the process of constructive social change.

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Appendix A

Instrumentation

The construction of the Discriminative Abilities Test (DAT) was the objective of a pilot study undertaken at the outset of the research project. Over a period of three months, four phases were carried out in the preparation of the measurement instrument.

Phase 1

Step 1. Situational Analysis and Response Enumeration

After the experimental site had been determined an informal survey of teachers, counselors, students, parents and community people (probation officers, campus aids, etc.) resulted in a sample of approximately 105 problematic situations. The survey was conducted through interviews, classroom discussions and self-observations collected from students.

Step 2. Each situation was re-written or elaborated to produce an episode requiring some decision for resolution of the problematic nature of the situation. These episodes were then submitted to a group of high school students for their assessment of how frequently the episode occurs and their opinions regarding likely responses from students in the community.

Frequently occurring episodes for which the students could generate at least five different responses were retained in the sample. These "situations" were then given to a teacher and parent for further enumeration of likely responses.

Phase 2

Step 1. Response Evaluation

"Significant Evaluators," a panel of judges were identified by means of an informal poll of several school classes, a group of teachers and a counselor. The judges were those individuals who were nominated as "respected and whose judgements about students' behavior are valued by the students." There were four judges, male and female, in each category: School staff, students, and parents/community persons. (The names and positions of the judges are included at the end of this appendix.)

Step 2. These significant evaluators or judges were each given a booklet containing the sample of episodes and responses. They rated the frequency of occurrence and the effectiveness of each response. The judges were given the option of writing in additional responses but seldom did so.

These responses were evaluated on a six point scale of effectiveness

Phase 3

Step 1 Reduction of the Pool of Items. Any episode which did not conform to the following item-generation rules was discarded from the pool of items.

1. Occurred infrequently in the environment.
2. Was not relevant to home, school or peer group interaction.
3. Presented an apparent dichotomous choice situation and/or generated very little variation in the type of likely response to the situation.
4. Generated too much variation in the judges' evaluation of the effectiveness of likely responses.
5. Presented a situation which was ambiguous or complex.
6. Generated numerous questions or qualifications for clarity.

Step 2. Formation of Multiple-Choice Items. The remaining items formed the pilot test item-pool. Each item was composed of the description of the problematic situation and six alternative responses. The alternatives were scored by averaging the judges' evaluations. The alternatives were selected so as to display a variety of types of responses which represented a range of effectiveness. Only the alternative responses which had little variability among the judges were selected. This item-pool was then divided into forms A and B for pre- and post-testing. Though not exactly alike, the two forms of the instrument presented situations which were similar in locale and problem focus. (See Appendix B.)

An artist's conception of the situation, an original line drawing was mounted on an overhead transparency.

Phase 4

Step 1. Pilot Test. The two forms of the DAT, consisting of 30 items was pre-tested on a group of black college students and a high school class (in another school). Due to time constraints only 20 of the items were completed by both groups. Some items were discarded because of their low association with the rest of the test.

The results of this pilot test were more useful in evaluating the operational efficiency of the test procedures rather than as a definitive test of the discriminative power of each item for the following reasons: (1) these pilot test subjects differed from the experimental subjects on such characteristics as AGE, SEX, and residence; (2) the situations were developed for the experimental subjects and the relevancy to pilot test subjects may be questioned; (3) the response alternatives may not have represented realistic choices for the pilot test subjects.

Step 2. The Discriminative Abilities Test was composed of three sub-groups of 20 items which were divided into similar forms of the Pre- and Post-test. The sub-groups of items were related to the focus on school, home, or peer (community) situations.

Judges (Consultants)

School Staff

Mrs. Sarah Boyd, Counselor
670 Lomita Drive, Stanford CA

Mr. Tillman Frazier, School Aid Para-professional
2448 Illinois Avenue, East Palo Alto, CA

Ms. Carol Hall, English Teacher
503 Runnymede Avenue, East Palo Alto, CA

Mrs. LaVerta Jones, Music Teacher
1037 Cynthia Lane, San Jose, CA

Community Persons/Parents

Mr. Robert Hoover, Nairobi College Administrator
196 Jasmine Way, East Palo Alto, CA

Mrs. Lana Kennon, Probation Officer
2247 Menalto Avenue, East Palo Alto, CA

Mrs. Katye McCall, Community Worker
1181 Jervis Avenue, East Palo Alto, CA

Mrs. Dolores Randall, Community Worker, Manager, Nairobi Co-Op
2548 Hazelwood Avenue, East Palo Alto, CA

Students

Valerie Sanders, Anthony Fitzhugh, Diane Tripplett, Stanley Walker

Appendix B

Sample Test Items

Pre-Test

Linda got into a fight with a white girl in class. The teacher broke up the fight and told Linda, a black girl, that she didn't want her in class any more. She let the white girl stay in the class.

(Responses)

1. I would go to see the Dean of Girls immediately and explain what happened. (3.5)*
2. I would ask the teacher to explain why I have to leave the class. (4.1)
3. I would tell the teacher if I have to go, the white girl has to go, too. (3.0)
4. I would bring my parents to school to talk with the principal and the teacher. (5.6)
5. I would tell the teacher that I'm not leaving. (1.7)
6. I would tell the teacher to put me out. (1.7)

Post-Test

Debbie was in a basketball game during P.E. The P.E. teacher called a pushing foul on Debbie for pushing a white girl on the other team. The white girl had pushed Debbie and had hit Debbie two or three times earlier in the game and the teacher had not called any fouls on the white girl. This was Debbie's fifth foul and the teacher told her to leave the court.

(Responses)

1. I would beat up the white girl right there on the court. (1.8)
2. I would leave the court like a good sport and wait until after school to get even. (3.1)
3. I would leave the court like a good sport and talk to the teacher later. (5.5)
4. I would tell the teacher what the white girl has been doing. (4.0)
5. I would jump on the teacher and the white girl. (1.8)
6. I would go and have a talk with the Dean of Girls. (3.0)

*Competence score which is the average of the judges' ratings on a 6-point scale of effectiveness.

Appendix C

Sample Lesson Plans

Treatment 1. Self-Study

Lesson 1 "How to Measure Behavior"

Purpose and Lesson Idea: As Behavior Managers, students will want to know WHY a person is doing what he is doing in order to change the behavior in any way. But before the student asks WHY, he needs to ask WHAT he is doing and HOW OFTEN he does it. Discussing Cues and Consequences (Lesson 3) is aimed at helping students identify the controlling conditions (what happens before and after the behavior), but by measuring the observable behavior itself--the presumed Cues and Consequences as well as any change in the behavior can be verified. After recording baserate observations of the behavior (prior to intervention), students will be better able to identify controlling conditions. Each student's change project will follow these procedures: (1) specifying the behavior target (2) recording systematic observation (3) analyzing the controlling conditions (4) identifying and implementing a change in the reinforcing consequences (5) recording behavior during intervention.

Procedures	Objectives
1. Teacher introduces lesson: "The goal of this course is to teach each of you what you need to know to become effective Behavior Managers." (Write Behavior Manager on the board). This means they will select a behavior target to be managed (means changed) in some way. (The choice of what will be changed is completely up to the student, however, it may be difficult to identify a behavior target.) Teacher should be probe by asking questions. "Have you been trying to get yourself to stop doing something and you just keep on going anyway...? Is there something you would like to be able to do but for some reason you can't get started...? (See Note A for suggestions for Behavior targets, analyses of these targets and sample change programs).	1a. Each student will select a behavior target, write it on the class card in terms of events that can be easily counted, and he will select an observation schedule appropriate to the type of behavior target he selects.
2. Teacher defines "behavior target" (Note A) and ask each student to specify behavior target in terms of something that can be easily counted. Pass out class cards.	

Students sign name, specify target. Teacher gives examples of increasing specificity, (e.g. "stop smoking... smoke fewer cigarettes..." "the number of cigarettes per day"). Students are to indicate WHAT is to be recorded.

3. After most students have begun to write behavior targets, teacher introduces second step: "Keeping a Record of the Behavior Target." Students indicate WHEN the behavior target will be recorded, e.g. (every day, only after dinner, etc., See Note A for Observation Schedules). Teacher checks each class card, signs it.

4. Teacher passes out plastic "golf score caddies." Instructs class in counting on score caddies. Graph paper is then passed out. Students are shown how to construct a graph. The horizontal axis is the days and/or times the behavior is recorded. Dates should be indicated as well as days. Eleven (11) days should be indicated on the horizontal axis. The vertical axis is the number of units of behavior actually counted, e.g. time in minutes, the number, etc. (See Note A for an example.) Teacher collects graphs. Data should be recorded at the beginning or end of every class meeting. (Rulers and pencils will be available).

1b. Students construct graphs for recording self-observations.

Evaluation (Criterion performance)

1. Each class card should identify a behavior target and observation schedule. Behavior target should be stated in terms of something easily counted, e.g. "the number of ...," "the length of time..." and the class card should indicate the type of observation schedule to be used, e.g., "per hour," "every day," "between 8 A.M. and 12 noon," etc.

Treatment 2. No Self-Study

Lesson 1 "Experiencing Personal Values"

Purpose and Lesson Idea: Inherent to understanding that behavior is caused by things the student has learned as well as by the immediate situation, the student needs to become conscious of the values that guide his behavior and to learn to criticize those values in terms of their consequences to himself and other people. This lesson on values will introduce a sensitivity to the feelings and perceptions of others. Seeing things from others' points of view facilitates real communication about differences. In addition, by exploring and becoming conscious of personal values, the student is less likely to be swayed by others, or to be the victims of "fears," "impulses" and other unconsciously held values. Students will be helped to recognize and analyze the contributions of their values to the decision they make.

Procedures	Objectives
1. Teacher Introduction: "People are individuals and may have individual reactions to the same situation. Values are learned and guide behavior of all people."	
2. Present symbol-objects (e.g. keys, bible, dollar bill, etc., See Note A). Compose four groups of students and provide each group with "stick-on labels of values."	1a. Students discuss personal values and make a group decision.
3. Write instructions on board: (1) Decide what "values" each symbol stands for (2) Write order of personal importance (3) Make a group decision on report of importance. (Each person should report his order to his group and tell why).	
4. Before the end of the period, each group reports (1) what symbols stand for and (2) group's order of importance.	
5. Teacher conducts discussion on the relationship of values of behavior. (See Note A) Students record data on their graphs at the end of the hour.	1b. Students discuss "values-game" with teacher.

Evaluation (Criterion Performance)

1. Observer notes group involvement and student participation.

2. Observer notes whether students can and do answer discussion questions teacher presents.

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TABLE 1

Frequency of Change in Competence Scores After Treatment for Each Condition

	Self-study (N=16)	No Self-study (N=11)	Control (N=10)
Increase	3	4	3
Decrease	13	7	7
Total	16	11	10

$X^2 = 1.09$, df=2
$p > .05$

TABLE 2

Probabilities Associated with Values as Small as the Observed Number of Competence Scores Which Increased After Treatment

	Self-study (N=16)	No Self-study (N=11)	Control (N=10)
p	.02	.55	.34

TABLE 3

Frequency of Competence Scores Above and Below the Common Median for the Posttest Only

	Self-study (N=16)	No Self-study (N=11)	Control (N=10)
Above $X_{.50}$	9	6	3
Below $X_{.50}$	7	5	7
Total	16	11	10

H = .708
df= 2
P > .05